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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/789,854

02/26/2004

Martin C. Baker

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11/30/2006

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EXAMINER

ABOAGYE, MICHAEL

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/789,854

Applicant(s)

BAKER ET AL.

Examiner

Michael Aboagye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 20-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/26/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the specification contains reference to US Patent Application serial No. 10/460,008 filed on June 12, 2003. Applicant is required to update the status of said application to US Patent No. 6,774,338. Appropriate correction is required.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
- I. Claims 1-19, drawn to hand-held laser fusion welding torch system, classified in class 29, subclass various.
 - II. Claims 20-25, drawn to a method of treating a surface of a work piece, classified in class 219, subclass 121.63.
3. Inventions Group II and Group I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used in laser cutting.
4. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. During a telephone conversation with Attorney Paul Amrozowicz on November 15, 2006 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-25 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krause et al. (US Patent No. 5,321,228) in view of Lemelson (US Patent No. 4,237,364).

Regarding claims 1, 6, 11, 12 and 16 Krause et al. teaches laser fusion welding torch system, comprising: a laser beam delivery system formed in an installation or a body and delivered a bout an axis (18 and 18', figure 1); a nozzle adapted to be coupled to a body, the nozzle having an aperture ("18", figure 1) through which a laser beam from the laser beam delivery system may pass; and an independent off-axis on not aligned filler media feed assembly (powder duct "6", figure 1, column 4, lines 31-44) that provides for independent manipulation and control of the laser beam and metal powder. Note said nozzle is connected to a laser installation (column 2, line 22-25) and said installation is composed of a proximal end to receive the nozzle fitted thereof (second end) and a distal end (first end). Note Krause et al. further teaches a plurality of powder delivery annular channels within the nozzle which are in fluid communication with the powder supply source (column 2, lines 18-22)

Regarding claim 2, 3, 7, 8, 15 and 19 Krause et al., teaches independent off-axis filler media feed or powder feed assembly is operable independent of the laser beam. Note the powder is feed from an independent source by a duct into the nozzle (column 2, lines 17-22).

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Regarding 4, 9, 14 and 18, Krause et al. teaches an off axis a gas flow delivery system operable to transmit gas to an operating site of the torch (gas duct "9", figure 1; column 2, lines 25-31 and column ^{4, lines} 31-43).

Regarding claims 5, 10, 13 and 17 Krause et al. teaches a removable gas cover or cap ("10", is connected to the nozzle by the thread "17", hence and detachable from the nozzle) adapted to detachably couple to the nozzle, the gas cover having an aperture through which the laser beam from the laser beam delivery system may pass when the gas cover is coupled to the nozzle (column 4, lines 31-39).

Krause et al. does not expressly teach a laser fusion welding torch system with a handle to be grasped by a hand and thereby operable as hand held.

However, Lemelson teaches a hand held laser fusion torch system with a handle to be grasped by a hand ("18, 19" figures 1-3; column 1, lines 10-15); said handle or trigger operable to activate a laser beam generating source; wherein a localized area on a workpiece can be targeted for spot welding without distortion or overheating (Lemelson, column 1, lines 25-32).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the laser fusion torch system of Krause et al. with a handle or trigger as taught by Lemelson so that the device can be hand held, manually operable and the laser source can be hand activated thereby allowing for localized area on a workpiece can be targeted for spot welding without distortion or overheating (Lemelson, column 1, lines 25-32).

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10. Claims 1-4, and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eloy (US Patent No. 5,993,550) in view of Lemelson (US Patent No. 4,237,364).

Regarding claims 1 and 6, Eloy teaches laser fusion welding torch system, comprising: a body ("4", figure 3) having a first end and a second end, the body first end adapted to couple to a laser beam delivery system (note the laser transmitting optical fiber "2"; a nozzle ("40", figure 3 and column 5, lines 28-30) coupled to the body second end, the nozzle having an aperture through which a laser beam from the laser beam delivery system may pass; and an independent off-axis filler media feed assembly (28a and 30a" figure 3, and column 4, lines 45-54) that provides for independent manipulation and control of the laser beam and metal powder.

Regarding claims 2, 3, 7 and 8, Eloy teaches an independent off-axis filler media feed assembly and supply system is operable independent of the laser beam (28a and 30a" figure 3, and column 4, lines 45-54).

Regarding claims 4 and 9, Eloy teaches an independent off-axis filler media feed assembly further comprises: a gas flow delivery system operable to transmit gas to an operating site of the torch ("28b, 30b, and 31, figure 3; and column 4, lines 33-47).

Eloy does not expressly teach a laser fusion welding torch system with a handle to be grasped by a hand and thereby operable as hand held.

However, Lemelson teaches a hand held laser fusion torch system with a handle to be grasped by a hand ("18, 19" figures 1-3; column 1, lines 10-15); said handle or trigger operable to activate a laser beam generating source; wherein a localized area on a workpiece can be targeted for spot welding without distortion or overheating (Lemelson, column 1, lines 25-32).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the laser fusion torch system of Eloy with a handle or trigger as taught by Lemelson so that the device can be hand held, manually operable and the laser source can be hand activated thereby allowing for localized area on a workpiece can be targeted for spot welding without distortion or overheating (Lemelson, column 1, lines 25-32).

11. Claims 1-4, and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petitbon (US Patent No. 4,814,575) in view of Lemelson (US Patent No. 4,237,364).

Regarding claims 1 and 6, Petitbon teaches laser fusion welding torch system, comprising: a laser producing body ("4", figure) having a first end and a second end, the body first end adapted to couple to a laser beam delivery system; a nozzle ("2", figure column 3, lines 62-65, and column 4, lines 12-15) coupled to the body second end, the nozzle having an aperture through which a laser beam from the laser beam delivery system may pass; and an independent off-axis filler media feed assembly ("14" figure and column 4, lines 12-15) that provides for independent manipulation and control of the laser beam and metal powder.

Regarding claims 2, 3, 7 and 8, Petitbon teaches an independent off-axis filler media feed assembly and supply system is operable independent of the laser beam ("14" figure and column 4, lines 12-15).

Regarding claims 4 and 9, Petitbon teaches an independent off-axis filler media feed assembly further comprises: a gas flow delivery system operable to transmit gas to

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an operating site of the torch ("16", figure; column 3, lines 65-68 and column 4, lines 13-15).

Petitbon does not expressly teach a laser fusion welding torch system with a handle to be grasped by a hand and thereby operable as hand held.

However, Lemelson teaches a hand held laser fusion torch system with a handle to be grasped by a hand ("18, 19" figures 1-3; column 1, lines 10-15); said handle or trigger operable to activate a laser beam generating source; wherein a localized area on a workpiece can be targeted for spot welding without distortion or overheating (Lemelson, column 1, lines 25-32).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the laser fusion torch system of Petitbon with a handle or trigger as taught by Lemelson so that the device can be hand held, manually operable and the laser source can be hand activated thereby allowing for localized area on a workpiece can be targeted for spot welding without distortion or overheating (Lemelson, column 1, lines 25-32).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lewis et al. (US 5,961,862), Pyritz et al. (US 6,696,664), Jones et al. (US 4,564,736), Everett (US, 804,815) and Hammeke (US 4,724,299) are also cited in PTO 892.


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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Aboagye whose telephone number is 571-272-8165. The examiner can normally be reached on Mon - Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AM
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Michael Aboagye
Assistant Examiner
Art unit 1725

11/24/2008

KEVIN KERNS
PRIMARY EXAMINER

Kevin Kerns 11/27/06